Which antibiotics lead to higher clinical cure rates in adults with acute maxillary sinusitis?

Williams JW Jr, Aguilar C, Makela M, et al. Antimicrobial therapy for acute maxillary sinusitis. *Cochrane Review,* latest version, 26 May 1999. In: the Cochrane Library. Oxford: Update Software [CD-ROM]

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DATA SOURCES

Studies were identified by searching MEDLINE and EMBASE/Excerpta Medica (to October 1998), scanning bibliographies of relevant articles, and contacting pharmaceutical companies and experts in the field.

STUDY SELECTION

Studies were selected if they were randomized controlled trials (RCTs) that compared an antibiotic with placebo or with another type of antibiotic in 30 or more patients. Patients were at least 18 years of age and had a history consistent with acute maxillary sinusitis confirmed by radiography or aspiration.

DATA EXTRACTION

Two or more reviewers independently extracted data on study characteristics; interventions; study duration; length of follow-up; co-interventions; compliance; and clinical, bacteriologic, radiographic, and adverse event outcomes.

MAIN RESULTS

Thirty-two RCTs with 34 comparisons met the inclusion criteria. Treatment duration ranged from 3 to 15 days. Penicillin V, 1,200 to 3,960 mg/day, led to an increase in clinical cure or improvement rates. No difference in clinical cure was seen between the amoxicillin and control groups in 2 heterogeneous RCTs. Newer nonpenicillin antibiotics had the same clinical cure rates as penicillin V or amoxicillin (8 RCTs); macrolides or cephalosporins had the same clinical cure rates as amoxicillin-clavulanate (8 RCTs). Five RCTs that compared tetracyclines with a heterogeneous mix of antibiotics could not be meta-analyzed.

Dropouts caused by adverse effects were fewer for macrolides or cephalosporins than for amoxicillin-clavulanate (9 RCTs).

CONCLUSION

In adults with acute maxillary sinusitis, penicillin V or amoxicillin is more effective than placebo and is as effective as non-penicillins for achieving clinical cure.